L Number	Hits	Search Text	DB	Time stamp
1	1367	wolff.in.	USPAT; US-PGPUB	2003/08/29 16:40
2	1601	amphiphile	USPAT; US-PGPUB	2003/08/29 16:40
3	4	wolff.in. and amphiphile	USPAT; US-PGPUB	2003/08/29 16:43
4	0	amdamantan$4	USPAT; US-PGPUB	2003/08/29 16:44
5	4100	adamantan$4	USPAT; US-PGPUB	2003/08/29 16:44
6	31630	(peg and polyethylene) pegylat$8 peo	USPAT; US-PGPUB	2003/08/29 16:46
7	522	adamantan$4 and ((peg and polyethylene) pegylat$8 peo)	USPAT; US-PGPUB	2003/08/29 16:45
8	110676	conjugat$9 bioconjugat$9	USPAT; US-PGPUB	2003/08/29 16:45
9	429	(adamantan$4 and ((peg and polyethylene) pegylat$8 peo)) and (conjugat$9 bioconjugat$9)	USPAT; US-PGPUB	2003/08/29 16:45
10	375385	peg polyethylene pegylat$8 peo	USPAT; US-PGPUB	2003/08/29 16:46
11	457	adamantan$4 same (peg polyethylene pegylat$8 peo)	USPAT; US-PGPUB	2003/08/29 16:46
12	419	(conjugat$9 bioconjugat$9) and (adamantan$4 same (peg polyethylene pegylat$8 peo))	USPAT; US-PGPUB	2003/08/29 16:47

(FILE 'HOME' ENTERED AT 14:21:03 ON 29 AUG 2003)

FILE 'CAPLUS' ENTERED AT 14:21:19 ON 29 AUG 2003

		E	AMIEL CATHERINE/IN,AU
L1	25	S	E3-6
		E	SEBILLE BERNARD/IN,AU
L2	195	S	E2-8
L3	206	S	L1 OR L2
L4	24238	S	CYCLODEXTRIN
L5	298679	S	POLYETHYLENE
L6	322180	S	L4 OR L5
L7	55	S	L3 AND L6
L8	737	S	L4 AND L5
L9	7	S	L8 AND L3
		E	PUN SUZIE/IN,AU
L10	4	S	E5-6
		E	HWANG SUZIE/IN,AU
L11	5	S	E3-8
L12	9	S	L10 OR L11
		E	DAVIS MARK/IN,AU
L13	339	S	E3-4 OR E13-14
		E	GONZALEZ HECTOR/IN,AU
L14	30	S	E3-12
		E	BELLOCQ NATHALIE/IN,AU
L15	16	S	E2-5
		E	CHENG JIANJUN/IN,AU
L16	26	S	E3-4
L17	395	S	L12 OR L13 OR L14 OR L15 OR L16
L18	26	S	L6 AND L17

L18 ANSWER 1 OF 26 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2003:666514 CAPLUS
TITLE: Linear, **cyclodextrin**-based polymers for the delivery of broad ranging therapeutics
AUTHOR(S): **Cheng, Jianjun**; **Bellocq, Nathalie**; **Pun, Suzie Hwang**; Khin, Kay T.; Liu, Aijie; Jensen, Gregory S.; Dartt, Christopher B.; **Davis, Mark E.**
CORPORATE SOURCE: Insert Therapeutics, Inc., Pasadena, CA, 91107, USA
SOURCE: Polymeric Materials Science and Engineering (2003), 89, 52
CODEN: PMSEDG; ISSN: 0743-0515
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal; (computer optical disk)
LANGUAGE: English
AB Unavailable

L18 ANSWER 2 OF 26 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2003:666072 CAPLUS
TITLE: Synthesis of Linear, .beta.-**Cyclodextrin**-Based Polymers and Their Camptothecin Conjugates
AUTHOR(S): **Cheng, Jianjun**; Khin, Kay T.; Jensen, Gregory S.; Liu, Aijie; **Davis, Mark E.**
CORPORATE SOURCE: Insert Therapeutics Inc., Pasadena, CA, 91107, USA
SOURCE: Bioconjugate Chemistry ACS ASAP
CODEN: BCCHES; ISSN: 1043-1802
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB 6A,6D-Bis-(2-amino-2-carboxylethylthio)-6A,6D-dideoxy-.beta.-**cyclodextrin** 1, a diamino acid deriv. of .beta.-**cyclodextrin**, is synthesized and condensed with difunctionalized PEG comonomers to give linear, high mol. wt. (Mw over 50 kDa) .beta.-**cyclodextrin**-based polymers (2-4) with pendant functionality (carboxylate). 2-4 are all highly sol. in aq. solns. (over 200 mg/mL). 20-O-trifluoroglycinylcamptothecin, 5a, and 20-O-trifluoroglycinylglycinylglycinylcamptothecin, 5b, are synthesized and conjugated to 2 to give polymer-camptothecin (CPT) prodrugs. The soly. of CPT is increased by more than three orders of magnitude when it is conjugated to 2. The rates of CPT release from the conjugates HGGG6 (high mol. wt. polymer (Mw 97 kDa), glyglygly linker and 6 wt % CPT loading) and HG6 (high MW polymer (Mw 97 kDa), gly linker and 6 wt % CPT loading) in either mouse or human plasma are dramatically accelerated over the rates of pure hydrolysis at pH = 7.4, indicating the presence of enzymic cleavage as a rate-detg. step at this pH in the release of the CPT. The pH of aq. soln. has a large effect on hydrolysis rate of CPT from HGGG6 and HG6; the lower the pH, the slower the rate in the range at 4.1 .ltoreq. pH .ltoreq. 13.1. The IC50's of polymer 2e, CPT, and the CPT conjugates HG6 and HGGG6 are found to be cell-line dependent with LS174T, HT29, A2780, and PC3 cells using in vitro MTT assays. The parent polymer 2e has very low toxicity to all cultured cells tested.

L18 ANSWER 3 OF 26 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2003:636419 CAPLUS
TITLE: Linear, **cyclodextrin**-based polymers for the delivery of broad ranging therapeutics
AUTHOR(S): **Cheng, Jianjun**; **Bellocq, Nathalie**; **Pun, Suzie Hwang**; Khin, Kay T.; Jensen, Gregory S.; Liu, Aijie; Dartt, Christopher B.; **Davis, Mark E.**
CORPORATE SOURCE: Insert Therapeutics, Inc, Pasadena, CA, 91107, USA
SOURCE: Abstracts of Papers, 226th ACS National Meeting, New York, NY, United States, September 7-11, 2003 (2003), PMSE-034. American Chemical Society: Washington, D. C.
CODEN: 69EKY9
DOCUMENT TYPE: Conference; Meeting Abstract
LANGUAGE: English
AB Linear, water-sol., **cyclodextrin**-contg. polymers are a new class of biocompatible materials that can be designed to provide desired properties and characteristics that are not achievable with other polymer delivery systems. A generalized synthetic strategy for these materials, a brief overview of their properties and results in animal models supporting their use as delivery vehicles for small mol. drugs, plasmid DNA, and oligonucleotides will be presented.

L18 ANSWER 4 OF 26 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2003:495047 CAPLUS
DOCUMENT NUMBER: 139:128714

TITLE: The effects of structure on gene delivery with linear .beta.- and .gamma.-**cyclodextrin**-containing polycations
AUTHOR(S): Popielarski, Stephen R.; Mishra, Swaroop; **Davis, Mark E.**
CORPORATE SOURCE: Chemical Engineering, California Institute of Technology, Pasadena, CA, 91125, USA
SOURCE: Journal of Inclusion Phenomena and Macrocyclic Chemistry (2002), Volume Date 2003, 44(1-4), 453-457
CODEN: JIPCF5; ISSN: 1388-3127
PUBLISHER: Kluwer Academic Publishers
DOCUMENT TYPE: Journal
LANGUAGE: English
AB **Cyclodextrin** (CD)-contg. polycations are prepd. by copolymn. of 3A3B-dideoxy-3A,3B-diamino-.beta.- and .gamma.-CDs with di-Me suberimidate.cntdot.2HCl to yield polyamidine products. Both alkyl- and alkoxy-diamines are used to vary the spacing between the CD and the amidine charge centers. It is found that the transfection efficiency and toxicity of such polycations is dramatically affected by the structure of the spacer sepg. the CD ring from the charge centers and less so by the type of CD used.
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 5 OF 26 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2003:494960 CAPLUS
TITLE: **Cyclodextrin**-containing polymers for gene delivery
AUTHOR(S): **Davis, Mark E.; Bellocq, Nathalie C.**
CORPORATE SOURCE: Chemical Engineering, California Institute of Technology, Pasadena, CA, 91125, USA
SOURCE: Journal of Inclusion Phenomena and Macrocyclic Chemistry (2002), Volume Date 2003, 44(1-4), 17-22
CODEN: JIPCF5; ISSN: 1388-3127
PUBLISHER: Kluwer Academic Publishers
DOCUMENT TYPE: Journal
LANGUAGE: English
AB **Cyclodextrin**-contg. polymers are now being explored as vehicles for delivering nucleic acids into cells. The structures of the **cyclodextrin**-contg. polycations affect the nucleic acid delivery efficiencies and their toxicities. Of interest is the fact that the **cyclodextrin**-contg. polymers reveal lower toxicities than polymers that lack the **cyclodextrins**. The **cyclodextrins** endow the nucleic acid delivery vehicles with the ability to be modified by compds. that form inclusion complexes with the **cyclodextrins**, and these modifications can be performed without disruption of the polymer-nucleic acid interactions. Thus, **cyclodextrin**-contg. polymers provide unique properties for gene delivery.
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 6 OF 26 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2003:381559 CAPLUS
DOCUMENT NUMBER: 138:358341
TITLE: Optimization of **cyclodextrin**-containing polymers specifically designed for gene delivery
AUTHOR(S): **Bellocq, Nathalie C.**; Hwang, Sue J.; **Davis, Mark E.**
CORPORATE SOURCE: Dep. of Chem. Eng., California Inst. of Technol., Pasadena, CA, 91125, USA
SOURCE: Polymeric Materials Science and Engineering (2001), 84, 809-810
CODEN: PMSEDG; ISSN: 0743-0515
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Cationic polymers synthesized by copolymg. **cyclodextrin** -dicysteamine with a difunctionalized comonomer are able to self-assemble with DNA and transfect cultured cells. The structure of .beta.-**cyclodextrin** polymers dets. performance in DNA delivery cell toxicity. The low toxicity of theses polymers make them attractive agents for gene delivery applications.
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 7 OF 26 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2003:227005 CAPLUS
DOCUMENT NUMBER: 138:358338
TITLE: Structural effects of carbohydrate-containing polycations on gene delivery. 3.**cyclodextrin**

type and functionalization
AUTHOR(S): Popielarski, Stephen R.; Mishra, Swaroop; **Davis, Mark E.**
CORPORATE SOURCE: Chemical Engineering, California Institute of Technology, Pasadena, CA, 91125, USA
SOURCE: Bioconjugate Chemistry (2003), 14(3), 672-678
CODEN: BCCHES; ISSN: 1043-1802
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Linear cationic .beta.-**cyclodextrin** (.beta.-CD)-based polymers can form polyplexes with plasmid DNA and transfect cultured cells. The effectiveness of the gene delivery and the cellular toxicity has been related to structural features in these polycations. Previous .beta.-CD polycations were prepd. from the cocondensation of 6A,6D-dideoxy-6A,6D-diamino-.beta.-CD monomers with other difunctionalized monomers such as di-Me suberimidate (DMS). Here, the type of CD and its functionalization are varied by synthesizing numerous 3A,3B-dideoxy-3A,3B-diamino-.beta.- and .gamma.-CD monomers. Both alkyl- and alkoxydiamines are prepd. in order to vary the nature of the spacing between the CD and the primary amines in the monomers. These diamino-CD-monomers are polymd. with DMS to yield amidine-based polycations. The nature of the spacer between the CD-ring and the primary amines of each monomer is found to influence both mol. wt. and polydispersity of the polycations. When these polycations are used to form polyplexes with plasmid DNA, longer alkyl regions between the CD and the charge centers in the polycation backbone increase transfection efficiency and toxicity in BHK-21 cells, while increasing hydrophilicity of the spacer (alkoxy vs. alkyl) provides for lower toxicity. Further, .gamma.-CD-based polycations are shown to be less toxic than otherwise identical .beta.-CD-based polycations.
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 8 OF 26 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2003:222644 CAPLUS
TITLE: Structure-property investigation of trehalose and .beta.-**cyclodextrin**-based polycations for gene delivery
AUTHOR(S): Reineke, Theresa M.; **Davis, Mark E.**
CORPORATE SOURCE: Department of Chemistry, University of Cincinnati, Cincinnati, OH, 45255, USA
SOURCE: Polymeric Materials Science and Engineering (2003), 88, 224-225
CODEN: PMSEDG; ISSN: 0743-0515
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal; (computer optical disk)
LANGUAGE: English
AB Unavailable
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 9 OF 26 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2003:185936 CAPLUS
TITLE: Structure-property investigation of trehalose and .beta.-**cyclodextrin**-based polycations for gene delivery
AUTHOR(S): Reineke, Theresa M.; **Davis, Mark E.**
CORPORATE SOURCE: Department of Chemistry, University of Cincinnati, Cincinnati, OH, 45221, USA
SOURCE: Abstracts of Papers, 225th ACS National Meeting, New Orleans, LA, United States, March 23-27, 2003 (2003), PMSE-138. American Chemical Society: Washington, D. C.
CODEN: 69DSA4
DOCUMENT TYPE: Conference; Meeting Abstract
LANGUAGE: English
AB Polycations have the ability to bind plasmid DNA (pDNA) through electrostatic interactions and condense it into particles that can be readily uptaken by cultured cells. Recent polycation structure-gene delivery studies have revealed that small changes in the mol. structure of polymeric vectors have substantial influences on DNA-binding and condensation, and on toxicity and gene delivery efficiency in vitro. The effects that structure has on toxicity and gene delivery efficiency are investigated here through synthesizing a series of amidine-based polycations that contain the carbohydrates trehalose and beta-**cyclodextrin** (CD) within the polymer backbone. The carbohydrate size (trehalose vs CD) and its distance from the DNA-binding charge centers affected the gene delivery behavior in BHK-21 cells. It was found that as the charge center was further removed from the carbohydrate unit, the toxicity increased. Also, as the size of the carbohydrate moiety

increased from trehalose to CD, the toxicity was reduced. The absence of a carbohydrate in the polycation backbone produced high toxicity in vitro. All carbohydrate amidine polycations transfected BHK-21 cells to approx. the same level of gene expression up to a charge ratio of 20 +/-. In addn., the effects that polycation charge center type had on toxicity and gene delivery efficiency was investigated. A series of quaternary ammonium polycations analogous to the amidine systems (contg. N,N,N',N'-tetramethyl-1,6-hexanediamine, trehalose, and CD) were synthesized and studied for in vitro gene delivery and toxicity. In all cases, it was found that the quaternary ammonium analogs exhibited similar toxicity profiles but lower gene expression values to their amidine analogs with BHK-21 cells. Also, transfection expts. conducted in the presence of chloroquine revealed increased gene expression from the quaternary ammonium contg. polycations but not from the amidine systems. This result indicated that the amidine polycations have improved endosomal escape properties relative to the quaternary ammonium polymers.

L18 ANSWER 10 OF 26 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:965258 CAPLUS
DOCUMENT NUMBER: 138:175679
TITLE: Structural Effects of Carbohydrate-Containing Polycations on Gene Delivery. 2. Charge Center Type
AUTHOR(S): Reineke, Theresa M.; **Davis, Mark E.**
CORPORATE SOURCE: Division of Chemistry and Chemical Engineering, California Institute of Technology, Pasadena, CA, 91125, USA
SOURCE: Bioconjugate Chemistry (2003), 14(1), 255-261
CODEN: BCCHES; ISSN: 1043-1802
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Recent polycation structure-gene delivery studies reveal that subtle changes in the mol. structure of polycations have substantial influences on DNA-binding and condensation and on in vitro toxicity and gene delivery efficiency. In Part 1 of this structure-property study using carbohydrate-contg. polycations it is demonstrated that as the amidine charge center is removed further from the carbohydrate unit within the polycation structure, the toxicity increases. Inclusion of larger carbohydrate species within the polycation backbone also reduces the toxicity. Here, the effect that polycation charge center type has on toxicity and gene delivery efficiency is investigated. A series of quaternary ammonium polycations contg. N,N,N',N'-tetramethyl-1,6-hexanediamine, D-trehalose, and .beta.-**cyclodextrin** are synthesized in order to elucidate the effects of charge center type (by comparison to the data given in Part 1) on gene delivery. In all cases, it is found that the quaternary ammonium analogs exhibit lower gene expression values and similar toxicities to their amidine analogs. Addnl., transfection expts. conducted in the presence of chloroquine reveal increased gene expression from quaternary ammonium contg. polycations and not from their amidine analogs.
REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 11 OF 26 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:965257 CAPLUS
DOCUMENT NUMBER: 138:175678
TITLE: Structural Effects of Carbohydrate-Containing Polycations on Gene Delivery. 1. Carbohydrate Size and Its Distance from Charge Centers
AUTHOR(S): Reineke, Theresa M.; **Davis, Mark E.**
CORPORATE SOURCE: Division of Chemistry and Chemical Engineering, California Institute of Technology, Pasadena, CA, 91125, USA
SOURCE: Bioconjugate Chemistry (2003), 14(1), 247-254
CODEN: BCCHES; ISSN: 1043-1802
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Cationic polymers have the ability to bind plasmid DNA (pDNA) through electrostatic interactions and condense it into particles that can be readily endocytosed by cultured cells. The effects that polycation structure has on toxicity and gene delivery efficiency are investigated here by synthesizing a series of amidine-based polycations that contain the carbohydrates D-trehalose and .beta.-**cyclodextrin** (CD) within the polycation backbone. The carbohydrate size (trehalose vs CD) and its distance from the charge centers affect the gene delivery behavior in BHK-21 cells. It is found that as the charge center is further removed from the carbohydrate unit, the toxicity is increased. Also, as the size of the carbohydrate moiety is enlarged from trehalose to .beta.-**cyclodextrin**, the toxicity is reduced. The absence of a

carbohydrate in the polycation produces high toxicity. All carbohydrate polycations transfect BHK-21 cells to approx. the same level of gene expression.

REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 12 OF 26 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:487421 CAPLUS
DOCUMENT NUMBER: 137:47645
TITLE: Preparation of adamantyl-**polyethylene** glycol containing sugar and peptide residues and inclusion complexes as therapeutic agents
INVENTOR(S): Hwang, Pun Suzie; **Gonzalez, Hèctor**; **Davis, Mark E.**; **Bellocq, Nathalie**; **Cheng, Jianjun**
PATENT ASSIGNEE(S): California Institute of Technology, USA; Insert Therapeutics, Inc.
SOURCE: PCT Int. Appl., 138 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002049676	A2	20020627	WO 2001-US48620	20011219
WO 2002049676	A3	20021227		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002029065	A5	20020701	AU 2002-29065	20011219
US 2003008818	A1	20030109	US 2001-21312	20011219
US 2003017972	A1	20030123	US 2001-21294	20011219

PRIORITY APPLN. INFO.:
US 2000-256341P P 20001219
US 2000-256344P P 20001219
US 2001-293543P P 20010529
WO 2001-US48620 W 20011219

AB The invention provides a compn. contg. particulate composite of a polymer with a formula of adamantyl-(CH2)n-Ja-PEGx-Lb-(functional group)y wherein J is NH, C(O)NH(CH2)d, NHC(O)(CH2)d, XH2SS, CO2, (CH2)eOP(O)[O(CH2)e-adamantyl]O, peptide, polypeptide, NH(CO)CHR1NH(CO)CHR1NH; R1 is (CH2)aCO2H, (CH2)aCONH2; PEG is O(CH2CH2O)z; where z is 2-500; L is H, NH2, NH(CO)(CH2)e(CO)CH2, SO2CH:CH2, SS, CO2, carbohydrate residue; a is 0-1, b is 0-1; d is 0-6; e is 1-6; yr is 0-1, x is 0-1, and a therapeutic agent. The compn. also contains a complexing agent. The polymer interacts with the complexing agent in a host-guest or a guest-host interaction to form an inclusion complex. A therapeutic compn. of the invention may be used to deliver the therapeutic agent and to treat various disorders. Both the polymer of the particulate composite and the complexing agent may be used to introduce functionality into the therapeutic compn. The invention also relates to a method of prepg. a compn. The method combines a therapeutic agent, a polymer having host or guest functionality, and a complexing agent having guest or host functionality to form the therapeutic compn. The complexing agent forms an inclusion complex with the polymer. The invention also relates to a method of delivering a therapeutic agent. According to the method, a therapeutically effective amt. of a therapeutic compn. of the invention is administered to a mammal (e.g. human or animal) in recognized need of the therapeutic.

L18 ANSWER 13 OF 26 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:299100 CAPLUS
DOCUMENT NUMBER: 137:164324
TITLE: Rational design of a new class of **cyclodextrin**-containing polymers for gene delivery
AUTHOR(S): **Hwang, Suzie Jean**
CORPORATE SOURCE: California Institute of Technology, Pasadena, CA, USA
SOURCE: (2001) 167 pp. Avail.: UMI, Order No. DA3015082 From: Diss. Abstr. Int., B 2001, 62(5), 2404
DOCUMENT TYPE: Dissertation
LANGUAGE: English
AB Unavailable

L18 ANSWER 14 OF 26 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:294332 CAPLUS
DOCUMENT NUMBER: 137:52241
TITLE: Development of a Nonviral Gene Delivery Vehicle for Systemic Application
AUTHOR(S): **Pun, Suzie Hwang; Davis, Mark E.**
CORPORATE SOURCE: Chemical Engineering, California Institute of Technology, Pasadena, CA, 91125, USA
SOURCE: Bioconjugate Chemistry (2002), 13(3), 630-639
CODEN: BCCHES; ISSN: 1043-1802
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Polycation vehicles used for in vitro gene delivery require alteration for successful application in vivo. Modification of polycations by direct grafting of addnl. components, e.g., PEG, either before or after DNA complexation, tend to interfere with polymer/DNA binding interactions; this is a particular problem for short polycations such as linear, .beta.-**cyclodextrin**-contg. polycations (.beta.CDPs). Here, a new method of .beta.CDP polyplex (polycation/DNA composite structures) modification is presented that exploits the ability to form inclusion complexes between **cyclodextrins** and adamantane. Surface-PEGylated .beta.CDP polyplexes are formed by self-assembly of the polyplexes with adamantane-PEG conjugates. While unmodified polyplexes rapidly aggregate and ppt. in salt solns., the PEGylated .beta.CDP polyplexes are stable at conditions of physiol. salt concn. Addn. of targeting ligands to the adamantane-PEG conjugates allows for receptor-mediated delivery; galactosylated .beta.CDP-based particles reveal selective targeting to hepatocytes via the asialoglycoprotein receptor. Galactosylated particles transfect hepatoma cells with 10-fold higher efficiency than glucosylated particles (control), but show no preferential transfection in a cell line lacking the asialoglycoprotein receptor. Thus, surface modification of .beta.CDP-based polyplexes through the use of **cyclodextrin** /adamantane host/guest interactions endows the particles with properties appropriate for systemic application.
REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 15 OF 26 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2001:204150 CAPLUS
TITLE: Optimization of **cyclodextrin**-polymers specifically designed for gene delivery
AUTHOR(S): **Bellocq, Nathalie C.**; Hwang, Sue J.; **Davis, Mark E.**
CORPORATE SOURCE: Department of Chemical Engineering, CALTECH, Pasadena, CA, 91125, USA
SOURCE: Abstracts of Papers - American Chemical Society (2001), 221st, PMSE-446
CODEN: ACSRAL; ISSN: 0065-7727
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal; Meeting Abstract
LANGUAGE: English
AB The current challenge in gene therapy is to develop a delivery method for transferring genetic material to desired cells in an effective, specific and non-toxic manner. Cationic polymers show promise for in vitro and in vivo delivery of DNA. Recently, we reported that linear, cationic .beta.-**cyclodextrin** contg. polymers (.beta.CDPs) are capable of delivering plasmid DNA to mammalian cells with low toxicity. .beta.CDPs were prepd. by the polymn. of a difunctionalized .beta.-**cyclodextrin** comonomer A with a difunctionalized comonomer B to give an (AB)X product with X between 4 and 6. The.beta.CDPs have the following structure: Different .beta.CDPs were prepd. by varying the structure of both comonomers A and B. We will show that the length of the "spacer group" Y (Y=0, 1) between the cup of the **cyclodextrin** and the cationic charge plays an important role in DNA binding. We will also show that some variations in the comonomer B, such as the no. of methylene units (Z=-(CH2)n- with n=0,1, 2, 3, 4, 6), the use of biodegradable linkers (Z=-S-S-) or the use of pH sensitive linkers (Z=-NH-) have significant effects on in vitro transfection efficiencies and toxicities.

L18 ANSWER 16 OF 26 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2001:115591 CAPLUS
DOCUMENT NUMBER: 134:300714
TITLE: Effects of Structure of .beta.-**Cyclodextrin** -Containing Polymers on Gene Delivery
AUTHOR(S): **Hwang, Suzie J.; Bellocq, Nathalie C.; Davis, Mark E.**
CORPORATE SOURCE: Division of Chemistry and Chemical Engineering, California Institute of Technology, Pasadena, CA,

91125, USA
SOURCE: Bioconjugate Chemistry (2001), 12(2), 280-290
CODEN: BCCHES; ISSN: 1043-1802
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Linear cationic .beta.-**cyclodextrin**-based polymers (.beta.CDPs) are capable of forming polyplexes with nucleic acids and transfecting cultured cells. The .beta.CDPs are synthesized by the condensation of a diamino-**cyclodextrin** monomer A with a diimidate comonomer B. In this paper, the effects of polymer structure on polyplex formation, in vitro transfection efficiency and toxicity are elucidated. By comparison of the .beta.CDPs to polyamidines lacking **cyclodextrins**, the inclusion of a **cyclodextrin** moiety in the comonomer A units reduces the IC50s of the polymer by up to 3 orders of magnitude. The spacing between the cationic amidine groups is also important. Different polymers with 4, 5, 6, 7, 8, and 10 methylene units (.beta.CDP4, 5, 6, 7, 8, and 10) in the comonomer B mol. are synthesized. Transfection efficiency is dependent on comonomer B length with up to 20-fold difference between polymers. Optimum transfection is achieved with the .beta.CDP6 polymer. In vitro toxicity varied by 1 order of magnitude and the lowest toxicity is obsd. with .beta.CDP8. The LD40 of the .beta.CDP6 to mice is 200 mg/kg, making this polymer a promising agent for in vivo gene delivery applications.
REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 17 OF 26 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2000:401687 CAPLUS
DOCUMENT NUMBER: 133:48948
TITLE: Supramolecular complexes containing therapeutic agents
INVENTOR(S): **Davis, Mark E.**; Gonzalez, Hector; Hwang, Suzie
PATENT ASSIGNEE(S): California Institute of Technology, USA
SOURCE: PCT Int. Appl., 70 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000033885	A1	20000615	WO 1999-US28547	19991203
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1133318	A1	20010919	EP 1999-965967	19991203
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002531530	T2	20020924	JP 2000-586375	19991203

PRIORITY APPLN. INFO.: US 1998-110847P P 19981204
US 1999-127856P P 19990405
WO 1999-US28547 W 19991203

AB A method of prepg. a supramol. complex contg. at least one therapeutic agent and a multi-dimensional polymer network is described. A supramol. complex prepd. by a method of the invention is described. A method of treatment by administering a therapeutically effective amt. of a supramol. complex of the invention is also described. Such a supramol. complex may be used as a delivery vehicle for various therapeutic agents. The polymers include linear or branched polyethyleneimine and **cyclodextrin** derivs.
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 18 OF 26 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2000:327605 CAPLUS
TITLE: Preparation and application of .beta.-**cyclodextrin**-based polymers for gene delivery.
AUTHOR(S): Hwang, Sue Jean; **Gonzalez, Hector**; **Bellocq, Nathalie**; **Davis, Mark E.**
CORPORATE SOURCE: Department of Chemical Engineering, California Institute of Technology, Pasadena, CA, 91125, USA
SOURCE: Book of Abstracts, 219th ACS National Meeting, San

Francisco, CA, March 26-30, 2000 (2000), BIOT-376.
American Chemical Society: Washington, D. C.
CODEN: 69CLAC

DOCUMENT TYPE: Conference; Meeting Abstract
LANGUAGE: English

AB Various cationic polymers, such as polylysine and polyethylenimine, have been used as gene delivery vectors, but with limited application due to their toxicity. **Cyclodextrin** (CD) mols. have relatively low toxicity and were used to prep. linear, cationic .beta.-**cyclodextrin** polymers by copolymg. difunctionalized .beta.-CD monomers with various difunctionalized comonomers. These polymers were shown to transfect cultured cells with up to 75% efficiency and with low toxicity. The issues considered in designing the polymers, including the various difunctionzlied .beta.-CD monomers and comonomers used, will be discussed.

L18 ANSWER 19 OF 26 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2000:34909 CAPLUS
DOCUMENT NUMBER: 132:94914
TITLE: Preparation of linear **cyclodextrin** copolymers
INVENTOR(S): **Gonzalez, Hector**; Hwang, Suzie Sue Jean; Davis, Mark E.
PATENT ASSIGNEE(S): California Institute of Technology, USA
SOURCE: PCT Int. Appl., 84 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000001734	A1	20000113	WO 1999-US14298	19990625
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6509323	B1	20030121	US 1998-203556	19981202
CA 2336390	AA	20000113	CA 1999-2336390	19990625
AU 9948305	A1	20000124	AU 1999-48305	19990625
AU 763114	B2	20030710		
EP 1093469	A1	20010425	EP 1999-931889	19990625
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
BR 9911754	A	20011106	BR 1999-11754	19990625
JP 2002519482	T2	20020702	JP 2000-558134	19990625
US 2002151523	A1	20021017	US 2002-97326	20020315

PRIORITY APPLN. INFO.:
US 1998-91550P P 19980701
US 1998-203556 A 19981202
US 1999-339818 A3 19990625
WO 1999-US14298 W 19990625

AB Linear **cyclodextrin** copolymers contg. an unoxidized and/or an oxidized **cyclodextrin** moiety integrated into the polymer backbone, useful as drug delivery vehicles, were prepd. For example, substitution reaction of 6A,6D-diiodo-6A,6D-deoxy-.beta.-**cyclodextrin** (2-step prepn. by a known procedure given) with NaSCH2CH2NH2 gave 79% 6A,6D-bis(2-aminoethylthio)-6A6D-deoxy-.beta.-**cyclodextrin**. This was stirred for 18 h at 80.degree. in DMF under N with an equiv of MeOC(:NH)(CH2)6C(:NH)OMe-2HCl in the presence of Et3N to give 18% of a title copolymer (CD copolymer). Media contg. doxorubicin and CD copolymer-doxorubicin complex (general complexation procedure given) were applied to cultured cell lines to show no toxicity to KB or KB-VI cell lines in the absence of doxorubicin.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 20 OF 26 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1999:633066 CAPLUS
DOCUMENT NUMBER: 132:193484
TITLE: Study on browning inhibition of black currant beverage
AUTHOR(S): **Cheng, Jianjun**; Cui, Chengdong; Qu, Jun
CORPORATE SOURCE: Food College, Northeast Agricultural University, Huerbin, 150030, Peop. Rep. China
SOURCE: Shipin Kexue (Beijing) (1999), 20(8), 41-44

CODEN: SPKHD5; ISSN: 1002-6630
PUBLISHER: Zhongguo Shipin Zazhishe
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
AB The browning inhibition of black currant beverage was studied. Decompn. of anthocyanins was the main reason for browning of black currant beverage. The sodium hexametaphosphate, sodium pyrophosphate, sodium polyphosphate, vitamin C and .beta.-**cyclodextrin** could inhibit browning of black currant beverage.

L18 ANSWER 21 OF 26 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1999:607456 CAPLUS
DOCUMENT NUMBER: 132:26733
TITLE: New Class of Polymers for the Delivery of Macromolecular Therapeutics
AUTHOR(S): **Gonzalez, Hector**; Hwang, Sue Jean; Davis, M. E.
CORPORATE SOURCE: Division of Chemistry and Chemical Engineering, California Institute of Technology, Pasadena, CA, 91125, USA
SOURCE: Bioconjugate Chemistry (1999), 10(6), 1068-1074
CODEN: BCCHES; ISSN: 1043-1802
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Cationic polymers show promise for the in vitro and in vivo delivery of macromol. therapeutics. Known cationic polymers, e.g., poly(L)lysine (PLL) and polyethylenimine (PEI), have been employed in native and modified forms for the delivery of plasmid DNA (pDNA) and reveal varying levels of toxicity. Here, we report the prepn. of a new class of cationic polymers that are specifically designed to deliver macromol. therapeutics. Linear, cationic, .beta.-**cyclodextrin** (.beta.-CD)-contg. polymers (CD-polymers) are synthesized by copolymg. difunctionalized .beta.-CD monomers (AA) with other difunctionalized comonomers (BB) such that an AABBAABB product is formed. The .beta.-CD polymers are able to bind .apprx.5 kbp pDNA above polymer to DNA (.+-.) charge ratios of 1.5, compact the bound pDNA into particles of approx. 100-150 nm in size at charge ratios above .+-.5, and transfect cultured cells at charge ratios above .+-.10. In vitro transfections with the new .beta.-CD-polymers are comparable to the best results obtained in our hands with PEI and Lipofectamine. Some cell line-dependent toxicities are obsd. for serum-free transfections; however, no toxicity is revealed at charge ratios as high as .+-.70- in transfections conducted in 10% serum. Single IV and IP doses as high as 200 mg/kg in mice showed no mortalities.
REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 22 OF 26 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1997:355208 CAPLUS
DOCUMENT NUMBER: 127:5838
TITLE: Metallocene films: engineered blends for critical packaging applications
AUTHOR(S): Brandenburg, Jeffrey S.; **Davis, Mark**
CORPORATE SOURCE: Marketing Technical Services, New England Extrusion, Turners Falls, MA, 01376, USA
SOURCE: SPO '96, Proceedings of International Business Forum on Specialty Polyolefins, 6th, Houston, Sept. 25-27, 1996 (1996), 213-229. Schotland Business Research: Skillman, N. J.
CODEN: 64LMAP
DOCUMENT TYPE: Conference
LANGUAGE: English
AB Engineered sealant films were from LDPE, ethylene-vinyl acetate copolymer, and polyolefins obtained with metallocene catalysts. Through proper resin selection, one can pick and choose the desired specific phys. properties of the contributing resins in order to arrive at a finished film with very unique end use properties.

L18 ANSWER 23 OF 26 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1996:683617 CAPLUS
DOCUMENT NUMBER: 125:328078
TITLE: Enantioselective hydrogenation of prochiral C=C bonds over noble metal catalysts supported by .beta.-**cyclodextrin** polymer
AUTHOR(S): Smith, Gerard V.; **Cheng, Jianjun**; Song, Ruozhi
CORPORATE SOURCE: Dep. of Chemistry and Biochemistry, Southern Illinois Univ., Carbondale, IL, 62901, USA
SOURCE: Chemical Industries (Dekker) (1996), 68(Catalysis of Organic Reactions), 479-483

CODEN: CHEIDI; ISSN: 0737-8025
PUBLISHER: Dekker
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Platinum, palladium, rhodium, and ruthenium were deposited onto a .beta.-**cyclodextrin**/epichlorohydrin copolymer (.beta.-CDP) to produce enantioselective heterogeneous catalysts. These catalysts were prepd. by refluxing a suspension of the corresponding metal salt and .beta.-**cyclodextrin** polymer in either mixed methanol-water or methanol-NaOH. The ability of these catalysts to catalyze the enantioselective hydrogenation of carbon-carbon double bonds was tested with di-Me itaconate (DMI) and trans-2-methyl-2-pentenoic acid (TMPA).

L18 ANSWER 24 OF 26 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1996:134119 CAPLUS
DOCUMENT NUMBER: 124:178374
TITLE: Laminates for form-fill-seal packaging
INVENTOR(S): Bauer, Frank T.; Watson, Richard K.; **Davis, Mark**; Kennedy, Thomas D.
PATENT ASSIGNEE(S): W.R. Grace and Co.-Conn., USA
SOURCE: PCT Int. Appl., 19 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9533621	A1	19951214	WO 1995-US6251	19950606
W: AU, BR, CA, JP, MX, NZ				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2138913	AA	19951207	CA 1994-2138913	19941222
CA 2191092	AA	19951214	CA 1995-2191092	19950606
AU 9526900	A1	19960104	AU 1995-26900	19950606
EP 764084	A1	19970326	EP 1995-922090	19950606
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
BR 9507937	A	19971118	BR 1995-7937	19950606
JP 10501191	T2	19980203	JP 1996-500939	19950606

PRIORITY APPLN. INFO.: US 1994-254389 A 19940606
US 1995-444469 A 19950519
WO 1995-US6251 W 19950606

AB The laminates useful for food packaging, etc., comprise a core layer comprising an oxygen barrier polymer, a heat-sealable layer comprising a homogeneous ethylene-.alpha.-olefin copolymer, an outer abuse-resistant polymeric layer; and an intermediate layer disposed between the core layer and each of the heat sealable layer and the outer layer, and comprising a polymeric adhesive.

L18 ANSWER 25 OF 26 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1996:26773 CAPLUS
DOCUMENT NUMBER: 124:177025
TITLE: Platinum-group metal **cyclodextrin** complexes and their use as command-cure catalysts in silicones
AUTHOR(S): Lewis, Larry N.; Sumpter, Chris A.; **Davis, Mark**
CORPORATE SOURCE: Polymer and Inorganic Systems Laboratory, GE Research & Development, Schenectady, NY, 12301, USA
SOURCE: Journal of Inorganic and Organometallic Polymers (1995), 5(4), 377-90
CODEN: JIOPE4; ISSN: 1053-0495
PUBLISHER: Plenum
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The command-cure concept is defined for a curable formulation as one with long work-life at ambient temp. and rapid cure time at elevated temp. This concept is explored for a curable silicone system, cured via hydrosilylation. CODMCl2 complexes (COD = 1,5-cyclo-octadiene; M = Pt, Pd) are reacted with beta-**cyclodextrin** (.beta.-CD) to make 1:1 inclusion compds. (2 is the PD-contg. compd. and 4 is the Pt-contg. compd.). Compds. 2 and 4 were analyzed by 1H NMR and x-ray powder diffraction. Their catalytic ability was evaluated in a model system as well as a polymeric system that gels upon cure. Surprisingly, the Pd analog 2 was a good command-cure catalyst whereas the guest compd. CODPdCl2 was not active in the hydrosilylation reaction. The Pt analog, 4, was an effective command-cure catalyst while the corresponding guest, CODPtCl2 was too active at low temp. in the hydrosilylation reaction. Addnl. Pt compds. and one Rh inclusion compd. were evaluated as command cure catalysts. These inclusion compds. were: 1:1 .beta.-CD:[CODRhCl]2, 1:1 .beta.-CD:CpPtMe3, (Cp = cyclopentadienyl); 1:2 .beta.-CD:MeCpPtMe3,

1:2 .beta.-CD:CODPtMe2. The effectiveness of all these inclusion compds. were evaluated in a no. of silicone systems.

L18 ANSWER 26 OF 26 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1994:259754 CAPLUS
DOCUMENT NUMBER: 120:259754
TITLE: Structure-directing effects in the crown ether-mediated syntheses of FAU and EMT zeolites
AUTHOR(S): Burkett, Sandra L.; **Davis, Mark E.**
CORPORATE SOURCE: Div. Chem. Chem. Eng., California Inst. Technol., Pasadena, CA, 91125, USA
SOURCE: Microporous Materials (1993), 1(4), 265-82
CODEN: MCMTEV; ISSN: 0927-6513
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The structure-directing effects of 15-crown-5 and 18-crown-6 in the syntheses of cubic. faujasite (FAU) and hexagonal faujasite (EMT), resp., were studied. The conformation and distribution of Na/crown ether complexes during synthesis and in the. product materials were characterized by Raman spectroscopy and by solid-state 1H-13C CP NMR. The balance between the structure-directing influences of alkali metal ions and crown. ethers on product formation was studied. The structural relations between the 2 polymorphs of faujasite and the specificity of the. crown ether structure-directing agents to these products are discussed in relation to a proposed mechanism of synthesis.